

**Amendments to the Claims:**

Listing of Claims:

1.-13. Cancelled.

14. (Currently Amended) A battery comprising (1) at least one positive electrode, (2) at least one negative electrode, (3) an electrolyte, and (4) a homogeneous microporous membrane ~~comprising~~ having at least one layer which comprises (a) a hot-melt adhesive, (b) an engineering plastics, (c) optionally a tackifier and (d) a filler having an average particle size of less than about 50 $\mu$ m;

said microporous membrane is bound permanently onto the surface of said at least one positive electrode or said at least one negative electrode; wherein said hot-melt adhesive, said engineering plastics and said filler are distributed evenly and uniformly in said microporous membrane.

15. (Previously presented) The battery of claim 14, wherein the microporous membrane comprises a tackifier, in an amount of about 2% to about 50% by weight, selected from the group consisting of a hydrocarbon resin and poly(vinylidene fluoride-hexafluoropropene).

16. (Previously presented) The battery of claim 14, wherein the filler is present in an amount of about 2% to about 50% of the membrane by weight, and wherein said filler is selected from the group consisting of fumed silica, alumina, titanium dioxide, molecular sieve, calcium carbonate, calcium silicate, glass, ceramic material and polytetrafluoroethylene.

17. (Currently Amended) The battery of claim 14, wherein said at least one positive electrode is a lithium-ion positive electrode.

18. (Currently Amended) The battery of claim 14, wherein said at least one negative electrode is a lithium-ion negative electrode,

19. (Original) The battery of claim 14, wherein the electrolyte is a lithium-ion electrolyte.

20. (Currently Amended) The battery of claim 19, wherein the lithium-ion electrolyte is a liquid lithium-ion electrolyte or a polymer lithium-ion electrolyte.

21. (Currently Amended) The battery of claim 14, wherein said microporous

membrane is bound onto at least one positive electrode and at least one negative electrode ~~by heat activation~~; wherein said microporous membranes and said electrodes adhere together without the addition of an adhesive and the condition for binding said microporous membranes onto said electrodes is at a temperature of about 35° C to about 125° C and under a pressure of about 0.5 to about 100 psi for a period of time of about 0.5 to about 250 minutes.

22. (Previously presented) The battery of claim 14, wherein the hot-melt adhesive is poly(ethylene-vinyl acetate) having a weight content of vinyl acetate from about 25% to about 90%, and from about 75% to about 10% weight of ethylene.

23. (Previously presented) The battery of claim 14, wherein the hot-melt adhesive is poly(ethylene-alkyl acrylate) having a weight content of alkyl acrylate from about 10% to about 30% and a weight content of ethylene from about 90% to about 70% and wherein the alkyl group preferably comprises from one to about five carbon atoms.

24. (Previously presented) The battery of claim 14, wherein the engineering plastics is selected from the group consisting of polyimides, polyamide imides, polyether imides, polysulfone, polyether sulfones, polyaryl sulfones, polyether ketones, polyether ether ketones, polyphenylene sulfides, polyacrylates, polyamides, polybutylene terephthalate, polystyrene, polystyrene-maleic anhydride, polychlorofluoroethane, polycarbonate, and poly(styrene-methyl methacrylate) or a combination thereof.

25. (Currently Amended) A battery comprising (1) at least one positive electrode, (2) at least one negative electrode, (3) an electrolyte, and (4) a homogenous microporous membrane having at least one layer which comprises ~~comprising~~ (a) a hot-melt adhesive, (b) an engineering plastics, (c) a hydrocarbon resin tackifier in an amount of about 2% to about 50% of the membrane by weight and (d) optionally a filler;

said microporous membrane is bound permanently onto the surface of said at least one positive electrode or said at least one negative electrode, wherein said hot-melt adhesive, engineering plastics, and tackifier are distributed evenly and uniformly in said microporous membrane.